

## Short communication

# Tattoos, childhood sexual abuse and adult psychiatric disorder in women

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## Summary

**Background:** Tattoos in women have been described in clinical samples as being associated with psychopathology, child sexual abuse (CSA), personality problems or alcohol abuse.

**Method:** A random community study of New Zealand women being primarily investigated to assess the coping strategies of those reporting CSA gathered information about tattoos, and indicators of different types of psychosocial problems.

**Results:** Women with tattoos were more likely to be younger, to drink more alcohol, to have more psychiatric symptoms and to show borderline personality features than were the non tattooed women. They were also more likely to report CSA.

**Conclusions:** Tattoos in women are statistically linked to CSA, and to later psychopathology in some women.

**Keywords:** Tattoos; childhood sexual abuse; alcohol use; borderline personality.

## Introduction

Tattooing, the practice of inserting permanent colours into the skin by introducing them through punctures has long posed an intriguing problem for medical scientists and sociologists (Agnew et al., 1965). In the sparse medical literature, tattooing is often discussed with reference to psychiatric and personality disorders (Ferguson-Rayport et al., 1955; Rapsa and Cusack, 1990; Rockoff, 1994). Gittleson and colleagues some years ago reported a survey of psychiatric inpatients and linked tattooing clearly to personality disorder, though the types of personality disorder were not described (Gittleson et al., 1969). More recently, Inch and Huws reported on four female psychiatric patients with tattoos, emphasising that they all had experienced childhood sexual abuse (CSA) (Inch and Huws, 1993). Arya thought that the case reports indicated borderline personality disorder instead and noted that at least two were alcohol

dependent (Arya, 1993). A recent series of acute psychiatric admission including 38 women found 5% with tattoos; there was no association with diagnostic category, perhaps because of small numbers (Williams, 1998). There are no community based studies published looking at the phenomena of tattoos.

The mores surrounding the practices of body adornment may be altering, with an apparent greater readiness by young people to use tattoos and body piercing for complex psychological reasons. We were interested to examine the characteristics of women in a community sample who had sought tattoos and to explore associations with abuse experiences, borderline personality features, alcohol use and psychiatric disorder.

## Subjects

A random community sub-sample of women originally selected from the electoral rolls in the Otago province of New Zealand, first studied in 1989, was followed up six years later in 1995. Details of the initial cross-sectional study have been reported already (Mullen et al., 1993). At that time, the women were sent a comprehensive postal questionnaire which included screening items about CSA. Two groups were invited for interview, all who reported CSA and an equal sized randomly selected control group of subjects without CSA. The interview was designed to gather more information about the abuse, her family of origin and a wide range of adult psychosocial. The assessment of abuse, sexual and physical in either childhood (under sixteen years) or adulthood, was made towards the end of the inter-

view after good rapport had been established with the female interviewer. Ethical permission to conduct the study was granted by the local Health Funding Ethics committee.

## Method

CSA included all acts of sexual advances before the age of 16. Physical abuse in childhood was defined as reporting regular physical punishment or hitting by a parent so severely as to produce lasting soft tissue injury. Adult sexual abuse involved either forced intercourse or oral or anal sex against her will after the age of sixteen. Adult physical abuse as a report of a physical assault since the age of 16 on at least one occasion. A cumulative score was calculated for child and adult sexual and physical abuse, none to four.

At the follow-up interview, items about physical health and receiving tattoos were included. Alcohol use included items on the number of drinks consumed on a typical day and how often more than six drinks were consumed on a single occasion. A high daily intake was defined as three plus drinks per typical day and heavy frequent intake as six plus drinks occurring at least monthly.

Personality characteristics were assessed using the revised Personality Diagnostic Questionnaire, selecting only those relating to borderline personality (Hyler et al., 1990; Hyler et al., 1992). The mean number of borderline items scored as well as the proportion with five or more items, were compared in women with and those without tattoos. Psychiatric symptoms and caseness were assessed with the short Present State Examination; data were analysed using the Catego program in which caseness was ascribed to women with an index of definition five or more (Wing et al., 1974; Wing et al., 1977). Self esteem was assessed with Robson's self concept questionnaire (Robson, 1989).

## Statistical analyses

Having a tattoo was cross-tabulated against demographic factors (age, marital state, qualifications), alcohol use, borderline personality characteristics, and each type of abuse using the chi square statistics. Mean values were compared with Students t-test or Mann Whitney U, as appropriate. Where of interest, the independent variables were cross-tabulated with each other.

## Results

### *The sample*

Ten women only reported having had a tattoo at some stage (2.8% of the total sample). Brief details of the tattoo design and its acquisition are given in the appendix.

The mean age for tattooed women was less than the non-tattooed women ( $n = 10$ , mean age 32.2 years  $sd$  5.4  $cf$   $n = 344$  mean age 47.1 years  $sd$  12.3  $f$  8.8  $p = 0.003$ ). All women with tattoos were aged under forty, suggesting a cohort phenomenon.

Women with tattoos were less often married than women without tattoos (6/10 60%  $cf$  244/344 70.9%  $\chi^2$  4.43  $df$   $p = 0.04$ ). The sample was essentially Pakeha (Caucasian), reflecting the local demographic characteristics with too few participants for statistical comparison by ethnicity.

### *Alcohol use*

Women with tattoos more often drank an average of three or more alcoholic drinks per day than those without tattoos (7/10-  $cf$  120/341,  $\chi^2$  4.3  $df$   $p = 0.04$ ) but although they were not more likely to have frequent alcohol binge (six plus drinks) episodes.

### *Psychiatric status*

Women with tattoos had a higher mean PSE symptom score ( $n = 10$ , mean 8.1  $sd$  7.6) than non-tattooed women ( $n = 344$  mean 2.9  $sd$  4.5  $f = 5.3$   $p = 0.02$ ). However, psychiatric caseness on the PSE between the two groups did not differ: one of the ten tattooed subjects and 26/344, 7.8%, of the non-tattooed subjects were PSE cases,  $\chi^2$  0.08,  $df$  1,  $ns$ ). The mean self esteem scores did not differ between the two groups (tattooed women mean 133.8  $sd$  28.5, non tattooed 143.2  $sd$  24.3,  $t = 1.20$   $df$  345  $ns$ ).

### *Borderline personality features*

Women with tattoos were more likely to have five or more criteria of borderline personality disorder than those without (4/10  $cf$  51/344, 14.8%  $\chi^2$  4.7  $df$   $p = 0.03$ ). Similarly, women with tattoos had higher number of borderline items than non-tattooed women (tattooed mean rank 271.8 non-tattooed 174.8  $z = -3.0$   $p = 0.003$ ).

### *Abuse experiences*

#### Individual abuses

Having a tattoo was more frequent in women reporting CSA (see Table 1).

#### Cumulative abuses

All women in the child sexual abuse group, by definition, reported at least one abuse, 101/173 (58.4%) reported two or more abuses, 36/173 (20.8%) three and 8/173 (4.6%) all four. These proportions of co-victimisation were much smaller for the control group without CSA (one abuse 34/181, 18.8%, two